ImmuCell Corporation

Investor Presentation
March 2021

(Nasdaq: ICCC)

Forward-Looking Statements

Cautionary Note Regarding Forward-Looking Statements (Safe Harbor Statement):

This presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Such statements include, but are not limited to, any statements relating to: our plans and strategies for our business; projections of future financial or operational performance; the timing and outcome of pending or anticipated applications for regulatory approvals; factors that may affect the dairy and beef industries and future demand for our products; the extent, nature and duration of the COVID-19 pandemic and its consequences, and their direct and indirect impacts on the Company's production activities, operating results and financial condition and on the customers and markets the Company serves; the scope and timing of ongoing and future product development work and commercialization of our products; future costs of product development efforts; the estimated prevalence rate of subclinical mastitis and producers' level of interest in treating subclinical mastitis given the current economic and market conditions; the expected efficacy of new products; estimates about the market size for our products; future market share of and revenue generated by current products and products still in development; our ability to increase production output and reduce costs of goods sold; the future adequacy of our own manufacturing facilities or those of third parties with which we have contractual relationships to meet demand for our products on a timely basis; the impacts of backlogs on customer relationships; the anticipated costs of (or time to complete) planned expansions of our manufacturing facilities and the adequacy of our funds available for these projects; the continuing availability to us on reasonable terms of third-party providers of critical products or services; the robustness of our manufacturing processes and related technical issues; estimates about our production capacity, efficiency and yield, which are highly subject to biological variability and the product format mix of our sales; the future adequacy of our working capital and the availability and cost of third-party financing; future regulatory requirements relating to our products; future expense ratios and margins; future compliance with bank debt covenants; costs associated with sustaining compliance with current Good Manufacturing Practice (cGMP) regulations in our current operations and attaining such compliance for the facility to produce the Nisin Drug Substance; our effectiveness in competing against competitors within both our existing and our anticipated product markets; the cost-effectiveness of additional sales and marketing expenditures and resources; anticipated changes in our manufacturing capabilities and efficiencies; the value of our net deferred tax assets; projections about depreciation expense and its impact on income for book and tax return purposes; anticipated market conditions; and any other statements that are not historical facts. Forward-looking statements can be identified by the use of words such as "expects", "may", "anticipates", "aims", "intends", "would", "could", "should", "will", "plans", "believes", "estimates", "targets", "projects", "forecasts", "seeks" and similar words and expressions. In addition, there can be no assurance that future developments affecting us will be those that we anticipate. Such statements involve risks and uncertainties, including, but not limited to, those risks and uncertainties relating to difficulties or delays in development, testing, regulatory approval, production and marketing of our products (including the **First Defense®** product line and **Re-Tain™**), competition within our anticipated product markets, customer acceptance of our new and existing products, product performance, alignment between our manufacturing resources and product demand (including the consequences of backlogs or excess inventory buildup), our reliance upon third parties for financial support, products and services, changes in laws and regulations, decision making and delays by regulatory authorities, currency values and fluctuations and other risks detailed from time to time in filings we make with the Securities and Exchange Commission (SEC), including our Quarterly Reports on Form 10-Q, our Annual Reports on Form 10-K and our Current Reports on Form 8-K. Such statements involve risks and uncertainties and are based on our current expectations, but actual results may differ materially due to various factors.

Table of Contents

[(1)]Detailed financial reports, summary press releases and conference calls open to interested investors are provided quarterly.

Section #1: Company Overview and Strategic Opportunity

Company Overview

ImmuCell Corporation (Nasdaq: ICCC) is an animal health company focused on:

- **Capitalizing** on the significant growth in sales of the **First Defense®** product line (for dairy and beef calves) and **revolutionizing** the subclinical mastitis treatment paradigm with **Re-Tain™**, our novel purified Nisin product (for dairy cows)
- **Delivering Immediate Immunity™** to newborn dairy and beef calves to improve herd productivity, while avoiding unnecessary dam vaccine injections, via the Company's leading-edge **First Defense®** product line
- **Addressing the $2 BILLION** of annual economic harm to the dairy industry due to mastitis infections WITHOUT traditional antibiotics used in human medicine – thereby **reducing** the amount of antibiotics in the human food chain, with **Re-Tain™** (in late stages of FDA approval process)

Company-owned headquarters and USDA production facility (34,850 ft² finished interior = 19,100 ft² on first floor and 15,750 ft² on second floor)

Company-owned Nisin facility (16,200 ft² finished interior = 9,800 ft² on first floor and 6,400 ft² on second floor)

Balance Sheet & Capitalization

Balance Sheet (as of 12/31/2020)	
Cash, cash equivalents and short-term investments	$7.9M
Net working capital	$9.9M
Total assets	$40.4M
Bank debt outstanding[(1)]	$9.5M
Total liabilities[(1)]	$12.1M
Stockholders' equity	$28.3M
Bank debt/equity	34%

Capitalization Table (as of 03/26/2021)	
Stock price (per share)	$9.76
Shares outstanding	7.2M
Options	0.4M
Warrants	0
Preferred stock	0
Convertible securities	0
Average volume (20-day)	62,090
Market cap	$70.5M

(1) Includes a loan from the State of Maine in the amount of $500,000 that does not bear interest until the fourth quarter of 2022 and is repayable without penalty at anytime.

What Role Does ImmuCell Play?

- **Focus on solving the two most frustrating problems for dairy systems** – scours and mastitis – in a way that reduces dependence on antibiotics
- Improve the food chain with **less antibiotics**[(1)]
- Cows are more productive if we **reduce the use of certain non-essential vaccines**
- **The demand for animal protein,** that must be produced efficiently while ensuring food quality and safety, increases as the human population grows[(2)]
- Developing new **international dairy and beef market** opportunities and exploring small ruminant (goats and sheep)

First Defense®

DUAL-FORCE First Defense®

TRI-SHIELD First Defense®

Coming Soon: Re-Tain™

(1) See Slide #48 for some relevant regulatory initiatives.
(2) The United Nations predicts that we will need to double food production to feed 10 billion people in the year 2050.

Disruptions/Catalysts

Product	Disruptions	Catalysts
First Defense®	The **First Defense®** product line **disrupts the scours prevention market** by providing an effective alternative to vaccines that are given to the mother cow	Our **expanded production capacity comes on-line during the second quarter of 2021** to help us fill the large backlog of orders
Re-Tain™	**Re-Tain™ disrupts the mastitis market** by providing the only treatment that does not require a milk discard or a meat withhold	We **anticipate FDA approval and market launch during 4Q 2021 or 2Q 2022**, subject to whether our final submission to the FDA requires one or two review cycles

Three Most **Critical Action** Items

1

Significantly grow sales of the **First Defense®** product line

2

Achieve FDA approval of **Re-Tain™**

3

Prove market acceptance of **Re-Tain™** with current $10 million worth of annual production capacity

4

Got Milk? Undeniably Dairy

	Coconut Juice	Almond Juice	Hemp Juice	Oat Juice	Soy Juice	Milk
Protein Content:[1]	0 grams	1 gram	3 grams	4 grams	6 or 7 grams	8 grams
Carbohydrate Content:[1]	10 grams[2]	16 grams[2]	24 grams[2]	24-25 grams	10 grams[2]	12-13 grams[3]
Cost Per Cup:[4]	$0.50	$0.50-$0.63	$1.00	$0.63	$0.13-$0.38	$0.19

(1) Grams per one cup serving as reported by POPSUGAR Fitness, a global media and technology company.
(2) The unsweetened versions of these juices have 0-4 grams.
(3) Ultra-filtered milk contains 13 grams of protein and only 6 grams of carbohydrates.
(4) These costs are very rough estimates based on online data. All prices fluctuate.

4

Enjoy some milk and cookies; Support the dairy industry

4

Eat more pizza; Support the dairy industry

Our **Product Lines**

First Defense®

Dual-Force®

Our First Defense® product line with *E. coli* and coronavirus claims

- **U.S. market opportunity:** About $22 million in annual sales of calf-level products to prevent scours (diarrhea) in newborn dairy and beef calves
- **USDA approved** in bolus format since 1991
- **USDA approved** in gel tube format since 2018

Tri-Shield®

Our First Defense® product line with *E. coli*, coronavirus AND rotavirus claims

- **Beyond Vaccination®:** With this unique breadth of claims, we compete more effectively at the calf-level and also compete against vaccines given to cows to improve the quality of the colostrum that they produce for newborns
- **U.S. market opportunity:** We estimate that annual sales of dam-level vaccine products used to prevent scours (diarrhea) are almost 2X the calf-level product sales
- **USDA approved** since 2017

Completing an investment of approximately $3.5 million to increase production capacity (annual sales value) for the **First Defense®** product line from approximately $16.5 million to approximately $23 million (see photos on next slide)

Re-Tain™

(Subject to FDA review and approval)

Our purified Nisin treatment for subclinical mastitis in lactating cows with zero milk discard

- **Market opportunity**: Mastitis is estimated to cause approximately $2 billion in economic loss to the dairy industry each year(1)
- **Construction of $21 million pharmaceutical production facility** is complete (see slide #47)
- First-phased submission of manufacturing Technical Section has been reviewed by FDA
- Second-phased submission made during first quarter of 2021
- **Target for FDA approval and market launch:**
  -Second quarter of 2022 if two submissions are required
  -Fourth quarter of 2021 if only one submission is required

Investing approximately $4 million to replace a CMO and bring formulation and aseptic filling services in-house during fourth quarter of 2022 or second quarter of 2023

(1) 2016 Cornell IGEM study.

Expansion of First Defense® production capacity

For a video tour of this new production space, see: YouTube https://youtu.be/bR4Dp8raAEc

What do Producers do to **Prevent Scours**?

	1	2	3
Action:	**Nothing**	**Treat the calf**	**Vaccinate the mother cow**
Estimated Product Sales:	**$0**[1]	**~$23.4 million**	**~$44.7 million**
Product Options:	**N/A**	**Calf-Guard by Zoetis** **BOVILIS Coronavirus by Merck**	**ScourGuard by Zoetis** **Guardian by Merck** **Scour Bos by Elanco**

[1] This figure does not include the cost of scours treatment products and associated labor.

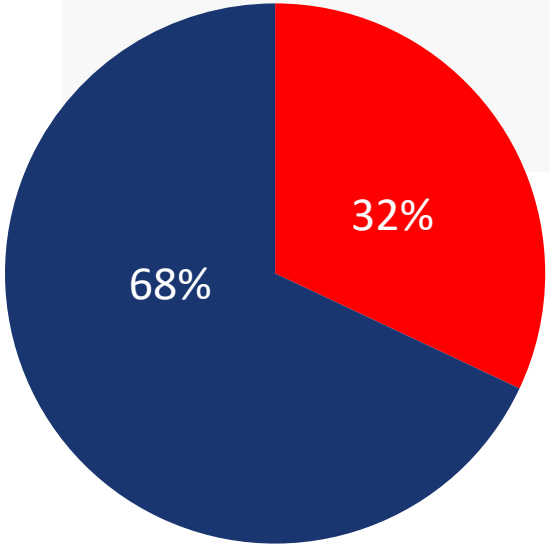
Calf-Level Competitive Product Comparison

Product	Mode-of Action	USDA Claims		
		E. coli	Corona	Rota
The **First Defense®** product line (ImmuCell)	Two-part: delivers bovine antibodies to the gut that are absorbed into the bloodstream	✓	✓	✓
Calf-Guard® (Zoetis)	Forces calf to mount an immune response to a modified-live virus oral vaccine to develop protective antibodies, delayed response, inactivated by feeding of colostrum		✓	✓
BOVILIS® Coronavirus (Merck)	Forces calf to mount an immune response to a modified-live virus intranasal vaccine to develop protective antibodies, delayed response		✓	

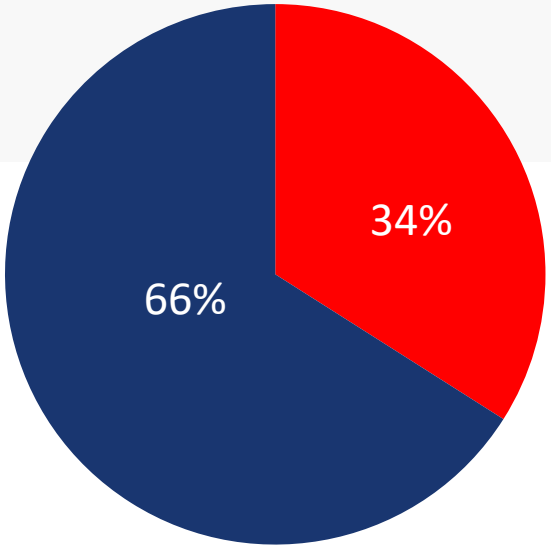
Calf-Level U.S. Market Share (in volume)

Long-term growth is expected due to the expansion of our sales & marketing team and the addition of a rotavirus claim to the **First Defense®** product line

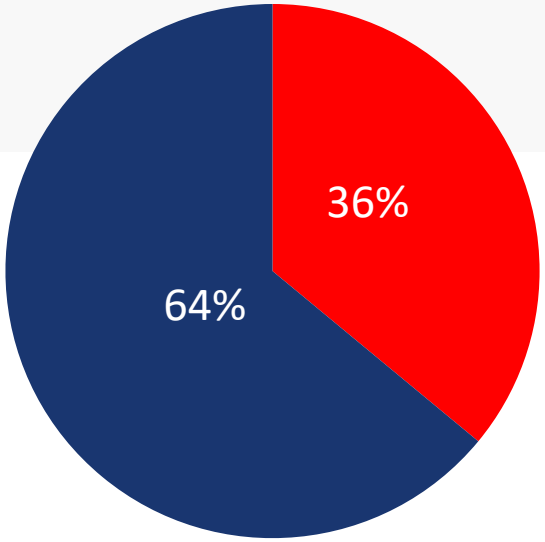
Year Ended December 31, 2017



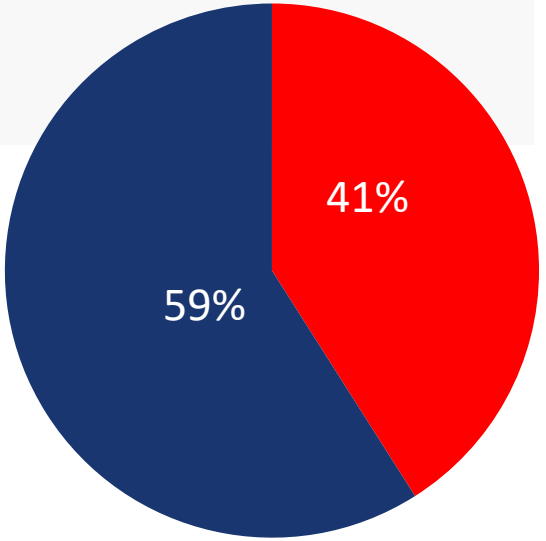
Year Ended December 31, 2018



Year Ended December 31, 2019



Year Ended December 31, 2020



Market Estimates Provided by Axxiom Consulting and Animalytix LLC

First Defense® Direct Competition

Waste Less, Get More

DAM-LEVEL SCOUR VACCINE


APPROX. 56% OF FUNDS SPENT GO TO
-BULL CALVES
-DOA/ABORTS
-LIMITED VACCINE RESPONSE

44% OF SPEND HITS TARGET

DUAL-FORCE First Defense®

First Defense®

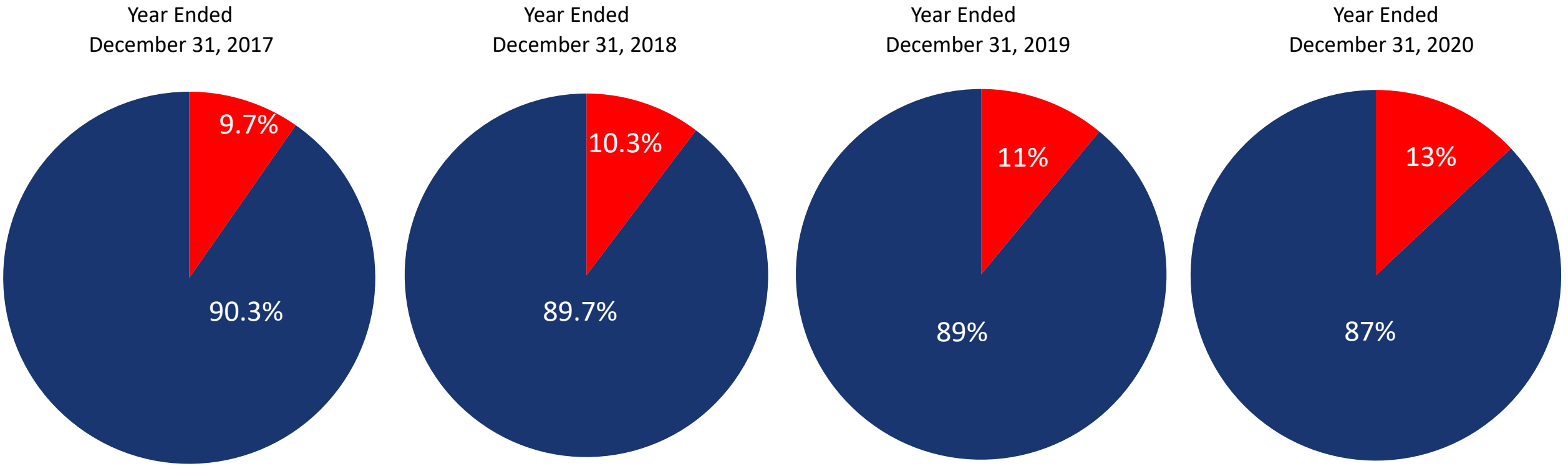
TRI-SHIELD First Defense®

100% OF FUNDS SPENT GO TO LIVEBORN VALUED CALVES

Calf-Level and Dam-Level U.S. Market Share (in volume)[1]

Huge market opportunity as we go **Beyond Vaccination®** and compete more effectively against vaccines that are given to mother cows

Join the revolution BEYOND VACCINATION®



[1]These unit volume figures account for the approximate number of calves and cows treated, even though two doses of the dam-level scour vaccines are required for first-calf heifers.

Market Estimates Provided by Axxiom Consulting and Animalytix LLC

First Defense® Direct Competition

Strategy to Increase Sales

- **We now support our distributors** with seven regional sales managers (including one open position) and one director of marketing, reporting to our vice president of sales and marketing.
- **Expanded sales force** communicating the value-proposition of the **First Defense®** product line directly to end-users while multiplying their efforts through distribution partners.
- **Growth is being generated** in multiple market segments: beef, calf ranch, dairy, vet clinics and fleet stores.
- We are initiating a process to achieve regulatory approvals for **First Defense®** in selected international territories.

Be a Calf Hero.
Go BEYOND VACCINATION®

IMMEDIATE IMMUNITY
First Defense®
CALF PROTECTION

BEYOND VACCINATION®

Our **Product Lines**

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(1) 2016 Cornell IGEM study.

Mastitis: Leading Cause of Economic Harm to the Dairy Industry

$2 Billion[(1)]

- **Mastitis** is a potentially fatal mammary gland infection
  - $2 billion per year in the U.S. alone
  - The single largest economic harm to the dairy industry[(2)]
- **Traditional antibiotic treatments** are available on the market, but milk from treated cows must be discarded
- **Re-Tain™**, our Nisin-based treatment for subclinical mastitis, **does not require a milk discard or meat withhold** because our bacteriocin is not a traditional antibiotic and is not used in human medicine

(1) 2016 Cornell IGEM study
(2) 2015 Science Daily News Release

Re-Tain™: Novel Alternative to Traditional Antibiotics

Novel Alternative

- **"Game changer"**: could make treatment of subclinical mastitis (infected, but still producing saleable milk) economically feasible
- The FDA has warned that the overuse of antibiotics that are considered critically important in human medicine may pose a **"high public health risk"**
- The concern is that widespread use of these drugs could encourage the growth of antibiotic-resistant bacteria **("superbugs")**
- Nisin is not used in human medicine
- **Bacteriocin Mode-of-Action**: Kills cell by drilling a hole in the colonizing bacterium's cell wall
- **Antibiotic Mode-of-Action**: Inhibits growth of bacteria by preventing cells from dividing/multiplying

Value Proposition

- **Zero milk discard** and zero meat withhold (in the U.S.)
- **Higher quality of milk** by having lower somatic cell counts resulting in:
  - Increased milk premiums to the producer
  - Longer shelf life for fluid milk
  - Better taste for cheese
- **Higher milk production** outputs(1)
- **Improved reproduction** efficiencies
- **Reduction of clinical flare-ups** from subclinical disease
- **Reduction in pathogen load** on the farm
- **Healthier cows;** reduction in culling

(1)Advanced Animal Diagnostics estimates that subclinical mastitis is responsible for more than 1,500 pounds (about $240 @ $16.00 per hundred weight) of lost milk production per infected cow.

Why Treat Subclinical Mastitis?

- A cow infected with subclinical mastitis is “stuck between a rock and a hard place” because the dairy farmer **KNOWS** she is sick but cannot **JUSTIFY** the cost of “dumped” milk required to treat her.
- Subclinical mastitis is a chronic infection that should not be ignored.
- USDA estimates that 21% of all dairy cows are treated with a mastitis drug.
- USDA estimates that 51% of all dairy cows are treated with third generation cephalosporins (traditional antibiotics).

Stage of Mastitis	Incidence Rate[1]	Annual Cost of Treatment Drugs
Clinical	20-25% per year	$50-$60 million[2]
Subclinical	20-25% at any given time	???[3]

[1]See Slide #49 for applicable sources. Subclinical mastitis is more prevalent than clinical mastitis.
[2]In lactating cows (excluding dry cow treatments of similar size)
[3]ImmuCell aims to revolutionize mastitis treatment practices by enlarging the market for the treatment of subclinical infections. With zero milk discard and zero meat withhold claims, our product candidate could make this economically feasible.

Review of Competitive Product Claims

Brand (Manufacturer)	Active Ingredient	Effective Against						Label Claims	
		Strep. agal.	*Staph. aureus*	*Strep. dysgal.*	*Strep. uberis*	CNS	*E. coli*	Subclinical	Clinical
Re-Tain™ (ImmuCell)	Nisin A							✓	(1)
Spectramast LC (Zoetis)	Ceftiofur						Clinical Only	✓	✓
Pirsue (Zoetis)	Pirlimycin							✓	✓
PolyMast (Boehringer Ingelheim)	Hetacillin								✓
Amoxi-Mast (Merck)	Amoxicillin							✓	
Today (Boehringer Ingelheim)	Cephapirin								✓
Masti-Clear (WG Critical Care)	Penicillin								✓
Dariclox (Merck)	Cloxacillin								✓

TRADITIONAL ANTIBIOTICS

(1) We may seek this claim sometime after first FDA approval.

Cost of "Dumped" Milk

Range in costs per cow associated with milk discard for traditional antibiotics with subclinical mastitis disease claims

Brand Name	Company	Treatment Days[1]	Discard Days[1]	Total Dump Days	Average Cost of Dumped Milk[2]	Cost per Treatment[3]
Re-Tain™	ImmuCell	0	0	0	$0	$30.00
Spectramast-LC	Zoetis	2-8	3	5-11	$64-$140	$9.78-$39.13
Pirsue	Zoetis	2-8	1.5	3.5-9.5	$44-$121	$10.18-$40.72
Amoxi-Mast	Merck	1.5	2.5	4	$51	$9.26

[1] Treatment and discard claims from product labels

[2] Averages are based on 70 lbs/day (low producing cows at 60 lbs/day and high producing cows at 80 lbs/day) and the USDA Class III milk price average of $18.16 for the year ended December 31, 2020. The range of these "dumped" milk costs varies from $38-$160 per cow. These "dumped" milk costs aggregate approximately $300M per year.

[3] These minimum advertised prices are subject to discount.

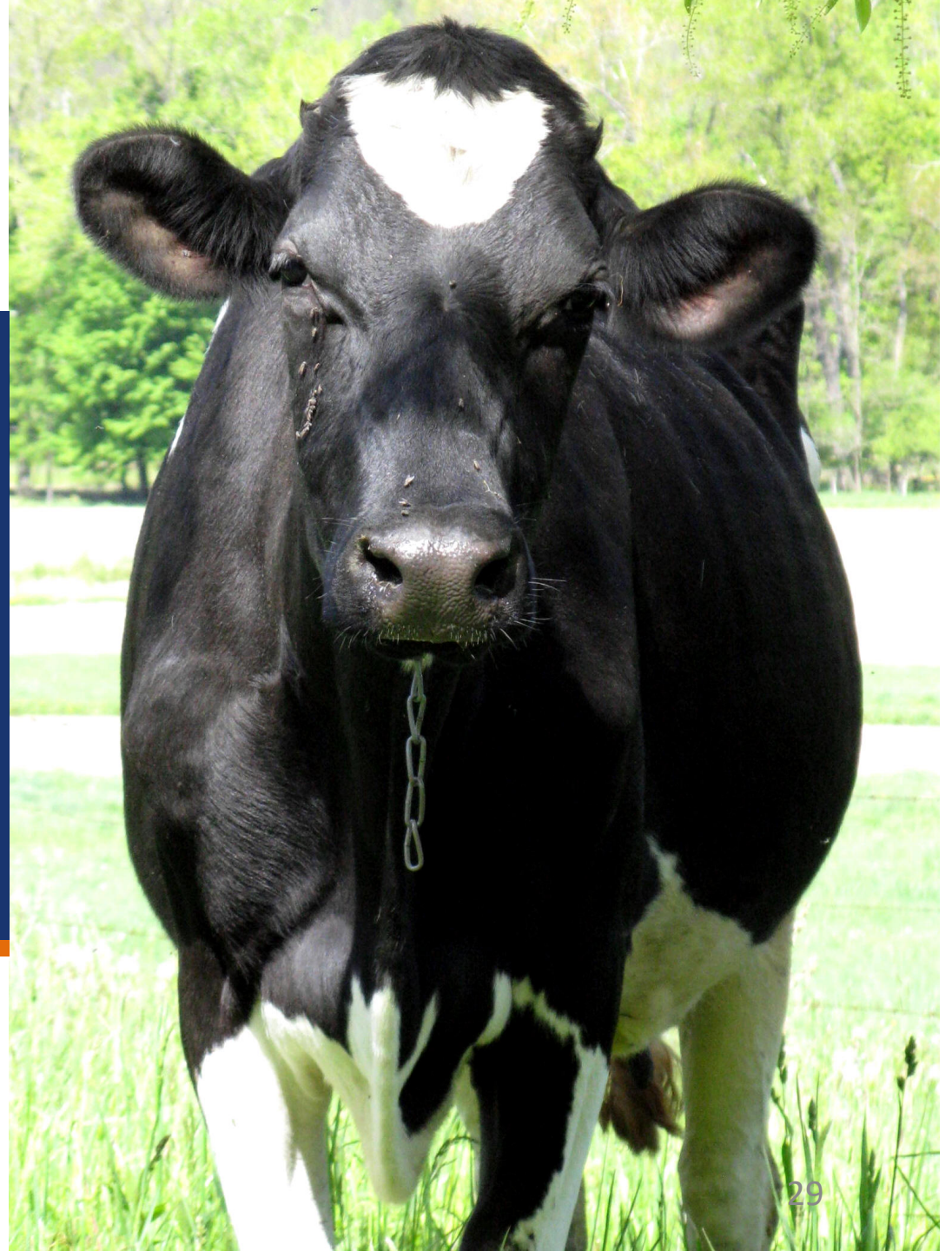
Status of NADA for Re-Tain™

We have completed 4 out of 5 NADA Technical Sections required for FDA approval

Development Item	Date Completed
1. Environmental Impact Technical Section Complete Letter from the FDA	**3Q 2008** ✓
2. Target Animal Safety (TAS) Technical Section Complete Letter from the FDA	**2Q 2012** ✓
3. Effectiveness Technical Section Complete Letter from the FDA	**3Q 2012** ✓
4. Human Food Safety (HFS) Technical Section Complete Letter from the FDA	✓
• Zero milk discard period and zero meat withhold period granted by the FDA	**2Q 2011** ✓
• Laboratory Method Transfer to detect Nisin in milk	**3Q 2018** ✓
5. Chemistry, Manufacturing and Controls (CMC) Technical Section	✓
• First-Phased Drug Substance submission to FDA	**1Q 2019** ✓
• Response from FDA on First-Phased Drug Substance submission	**3Q 2019** ✓
• Second-Phased Drug Substance and Drug Product submission to FDA	**1Q 2021** ✓
	Date Anticipated
• Response from FDA on Second-Phased Drug Substance and Drug Product submission	**6 months after submission**
6A. NADA Approval by FDA after 60-day administrative review (if first time approval)	**4Q 2021**[(1)]
6B. NADA Approval By FDA after 60-day administrative review (if second time approval)	**2Q 2022**[(1)]
7. We are investing approximately $4 million to create our own Drug Product formulation and aseptic filling facility	**4Q 2022 or 2Q 2023**

[(1)] See current SEC filings for detailed description of events that must occur to achieve this milestone in accordance with this projected timing and some of the risks that could prevent this from happening as projected.

Section #2: Testimonials



Customer Testimonials

"**First Defense®** is like an insurance policy that pays for itself in spades. Say you cut your death loss from, conservatively, 8 to 2 percent. If you have 300 calves a month, that's 18 more calves a month or 216 calves a year more that you are able to raise. That fuels the growth of the whole dairy."

Arie Roeloffs
Southfield Dairy
5,000 cows
Wendell, Idaho

"About seven years ago, we were having a serious problem with rotavirus and coronavirus; we were losing a lot of calves. Our veterinarian recommended administering **First Defense®** to newborns. It took care of the problem and I couldn't be happier. We've given **First Defense®** to every heifer calf since."

Jay Van Der Hoek
Van Der Hoek Dairy
1,800 cows
Modesto, California

"Approximately 10 years ago we had a minor flare-up of scours in our herd. Treating the calves was costly and time-consuming and it set the calves back in terms of performance. The following year we administered **First Defense®** to every newborn. Scours became basically non-existent. Now each calf receives **First Defense®** within their first few hours of life."

Brad Bader
Carrousel Farms
700 head beef operation
Monroe, Wisconsin

"We began using **First Defense®** during the 2013 calving season when we were treating what seemed like half of our calves for scours. Since using **First Defense®**, we have treated only four calves for scours out of our 600 head herd. **First Defense®** really works!"

Brian Marshall
Marshall & Fenner Farms
600 head cow/calf beef operation
Malta Bend, Missouri

Customer Testimonials

"**Tri-Shield®** is the most reliable way for us to prevent calf scours and it is the only thing we need to use."

Kazmeiro (Kazzie) Nero

Oakwood Dairy
Auburn, NY

Oakwood Dairy is a 2,000 head dairy with calves raised In individual stalls within a greenhouse barn. They removed ScourGuard 4KC after seeing results with **Tri-Shield®**.

"Diagnostics have shown rotavirus has been the cause of calf deaths in many herds, even well managed dairies that are very clean. **Tri-Shield®** is our new tool of choice to prevent rotavirus scours."

Mark Hardesty, DVM

Maria Stein Animal Clinic
Maria Stein, OH

The Maria Stein Animal Clinic has 9 practicing veterinarians serving 45,000 dairy cows in Western Ohio and Eastern Indiana.

"Over the years we layered in 3 different products, trying to prevent scours, but with **Tri-Shield®** we eliminated all of those, and calf health is better than ever, not often can we cut costs in half and improve, but **Tri-Shield®** has done that for us."

Connie Soemann

McCollum Farms
Godport, NY

McCollum Farms is a 1,600 head dairy with calves in hutches outside for 9 months, hutches moved inside over winter.

"We have been using **Tri-Shield®** for 2 years now and have noticed a tremendous reduction in scours. It's so easy to administer and performs every time."

Sasha Rittenhouse

R Enterprises
New Carlisle, OH

R Enterprises is a beef seedstock operation raising feed efficient, sound, functional cattle that excel in carcass quality.

"Our day-one protocols are consistent and calf management top notch, but we were still able to see a significant reduction in treatment costs within those first two-weeks of life."

Matt Kunde

P7 Dairy
Roswell, NM

P7 Dairy is a 4,300 head Holsteins operation milking 3 times a day. P7 is a progressive data driven farm. Calves are fed pasteurized colostrum administered with disposable esophageal tubes and disposable colostrum storage bags at birth. Calves are housed in hutches.

Customer Testimonials

"We've had a legacy of rotavirus here. We couldn't live without **Tri-Shield®**. It's good for our calves and our employees. We have used it since it came out and won't ever stop."

Charley Hansen

4C Corporation
Duchesne, UT

4C Corporation is a 3,000 head Jersey/Holstein dairy in the high desert area of Utah.

"**Tri-Shield®** is much easier to apply than a dam-level scour vaccine or Calf-Guard®. A one-step process with no waste on DOA's or cows that don't give colostrum."

Brent Wickstrom

Wickstrom Jersey Farm
Hilmar, CA

Wickstrom Jersey Farm is a 2,000 head farm whose heifers feed into an off-site calf ranch owned by the dairies.

"We had lots of issues with our calves before **Tri-Shield®**. Lab results confirmed we were dealing with all three pathogens (E. Coli, coronavirus, and rotavirus). Since we started **Tri-Shield®** the calves have been doing much better, I haven't lost a calf to scours in the past 9 months."

Alyssa Fischer

Darian Acres
Rio, WI

Darian Acres is a dairy with 30-50 calves per month. Calves receive colostrum and then milk replacer, fed by bottle for two weeks, then by pail. Calves are on milk until 8 weeks old when they are weaned. They are housed in hutches.

"Out pasteurized colostrum program is highly monitored. We routinely track bacterial count and solids. Our blood total proteins average 6.7 mg/ml. But **Tri-Shield®** has an added effect over a quality colostrum program. Fewer calves shedding pathogens at the calf ranch protects not only our calves but all calves at the ranch."

Chris Terra

Red Top Jersey
Chowchilla, CA

Red Top Jersey is a 4,000 head farm whose heifers feed into an off-site calf ranch owned by the dairies. They have tried other scour prevention programs like ScourGuard® and Calf-Guard® in the past but have moved to only **Tri-Shield®**.

"**Tri-Shield®** is a highly effective and easy to deliver, without colostrum interference. I have received lots of positive feedback from my customers using **Tri-Shield®**. I also use **Tri-Shield®** on our personal Angus herd and have had great results."

Vince Collision, DVM

Collision Veterinary Services
Rockwell City, IA

Collison Veterinary Services provides Veterinary and Embryo services.

Customer Testimonials

RESEARCH PROVEN

…simple to administer and produces results

"Prior to adding **First Defense®** to our regimen, our calves would always run into problems with salmonella after having scours seven to ten days after birth. We have been using **First Defense®** at Cal Poly State University's dairy unit and have seen calves getting through the first two weeks of life stage really successfully. We would recommend **First Defense®** to anyone. This product is simple to administer and produces results."

-Rich Silacci, Cal Poly State University, San Luis Obispo, CA

…a huge return

"We have been using **First Defense®** for the last 3-4 years and are really happy with the product. For us it's important, it's a big investment and a huge return. The product is convenient and versatile. Knowing we have protection as soon as the calf hits the ground is satisfying and comforting. This product gives assurance."

-Dan Kullot, DVM, Syracuse Diary, Syracuse, KS

…we went from 40% scour down to 15%

"The first two weeks of life are very important because that affects her milk production for the rest of her life. And we've made a change in the last 30 days and we went from 40% scour incidences down to about 15% scour incidences. But then I've also used **First Defense®** on other dairies and it worked phenomenal for me too."

-Danny Cundiff, G2 Producers, Dumas, TX

…give to the calf as soon as it's born

"The thing that I like about **First Defense®** is that you give to the calf as soon as it's born. There are some products on the market today that you have to give to the calf at birth and the recommendation is to wait 30 minutes or longer before you can feed colostrum. It's so hard to tell a dairyman or a calf raiser to delay feeding colostrum when that's the most important thing to give the calf."

-Steve Hayes, DVM, Day 1 Technology, Winona, MN

…we noticed a big difference in milk and grain intake

"You can just compare calves that you have on **First Defense®** compared to calves that aren't. There's definitely a big difference. Maybe not day one, but as they're in their first three weeks when they're in the calf hutches and they're on milk. Once they start grain, we noticed a big difference on their milk and grain intakes, as well as just being healthier all around."

-Zach Damrow, Deagull Bay Dairy, American Falls, ID

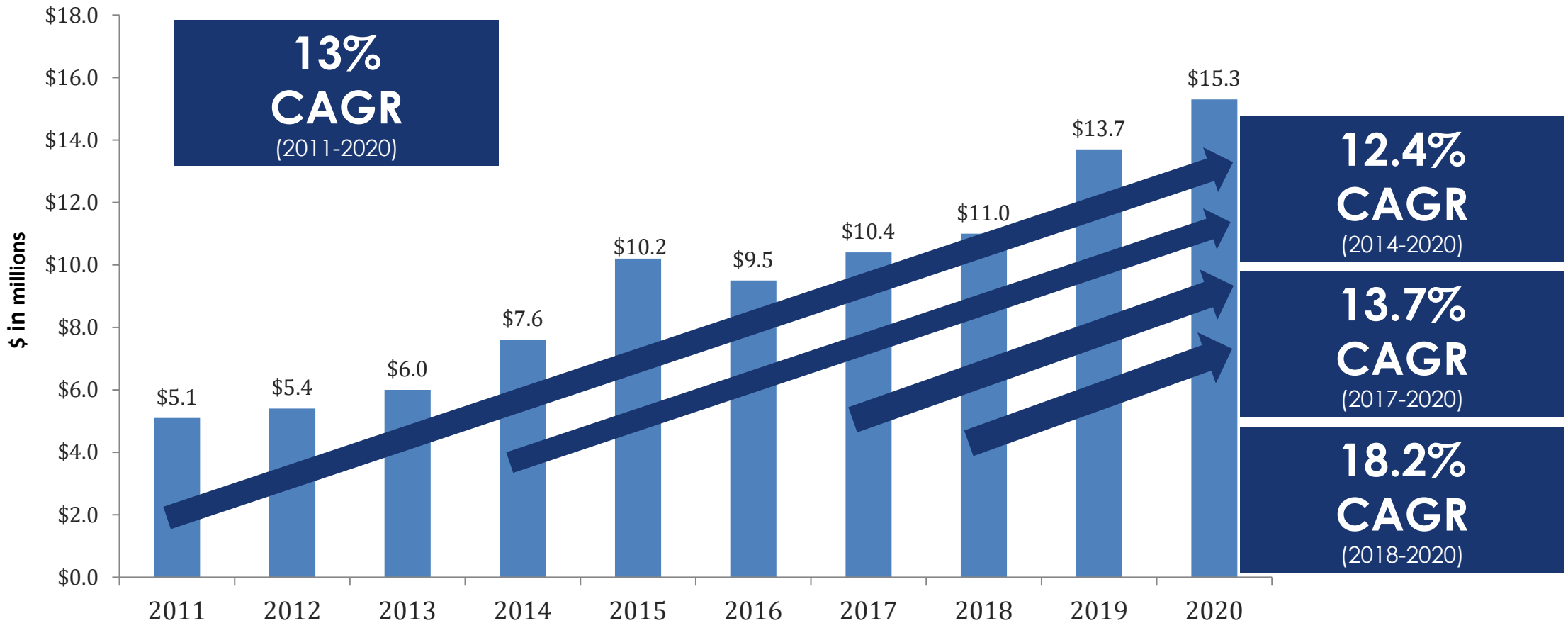
…dropped our scours rate by about 75%

"We did a trial and found that **First Defense®** as well as a different colostrum pasteurizer dropped our scours rate by about 75%."

-Katie Grinstead, Vir-Clar Farms, Fond du Lac, WI

Section #3: Financial Review

Total **Product Sales**



Financial Results (in thousands, except per share amounts)

	During the Years Ended December 31,	
	2020	**2019**
Product Sales	**$15,342**	**$13,723**
Loss Before Income Taxes	**($1,032)**	**($1,267)**
Net Loss	**($1,022)**	**($1,296)**
Net Loss Per Share	**($0.14)**	**($0.19)**

Income Statement

($ in millions, except percentages and per share amounts)	2017	2018	2019	2020
Product Sales	$10.4	$11.0	$13.7	$15.3
Gross Margin	$5.2	$5.2	$6.7	$6.9
Gross Margin *%*	*50%*	*47%*	*49%*	*45%*
Net Operating Loss	$0.2	$1.4[(1)]	$1.0	$1.4
Net Loss	$0.2	$2.3[(1)(2)]	$1.3	$1.0[(3)]
Net Loss Per Share	$0.03	$0.42[(1)(2)]	$0.19	$0.14[(3)]

(1) These figures are net of a $700,000 gain (before taxes) from a sale of technology recorded during the third quarter of 2018.
(2) These figures include non-cash tax expense of $563,000 pertaining to our deferred tax valuation allowance that was recorded during the second quarter of 2018.
(3) Includes $938,000 of other income from the forgiveness of our Paycheck Protection Program loan from the federal government.

Non-GAAP Measures

(in thousands)	During the Years Ended December 31, 2017	2018	2019	2020
(Loss) before income taxes[(1)]	($438)	($1,860)	($1,267)	($1,032)
Depreciation, amortization and stock-based compensation	1,119	1,882	2,597	2,703
Income before income taxes[(1)] and certain non-cash expenses	$681	$22	$1,330	$1,671

(1) The Company has federal net operating loss carryforwards worth approximately $14,642,000 as of December 31, 2020.

Generally, a non-GAAP financial measure is a numerical measure of a company's performance, financial position or cash flow that either excludes or includes amounts that are not normally excluded or included in the most directly comparable measure calculated and presented in accordance with GAAP. The non-GAAP measures included in this press release should be considered in addition to, and not as a substitute for or superior to, the comparable measure prepared in accordance with GAAP. A reader should review our Statements of Cash Flows for a detailed understanding of our sources and uses of cash. We start with our reported (loss) before income taxes because presently we are not paying cash for income taxes and do not anticipate paying significant cash for income taxes in the near-term future. We believe that considering the non-GAAP income before income taxes and certain non-cash expenses assists management and investors by looking at our performance across reporting periods on a consistent basis excluding these certain charges that are not uses of cash from our reported (loss) before income taxes. We calculate non-GAAP income before income taxes and certain non-cash expenses as indicated in the table above.

Capital Expenditures

Our capital expenditures during the seven-year period from January 1, 2014 through December 31, 2020 have been larger than our historical norm primarily due to investments to increase our production capacity for the **First Defense®** product line and to construct and equip our Drug Substance production facility for **Re-Tain™**, as detailed in the following table and footnotes:

	Cash Paid During the Years Ended					
	A	B	C	D	E	Total
December 31, 2014	$1,041	$—	$—	$—	$471	$1,512
December 31, 2015	1,991	265	—	—	463	2,719
December 31, 2016	1,173	2,093	—	—	320	3,586
December 31, 2017	—	17,686	—	—	74	17,760
December 31, 2018	—	1,596	—	—	434	2,030
December 31, 2019	—	—	279	538	574	1,391
December 31, 2020	—	—	2,938	581	554	4,073
Total	$4,205	$21,640	$3,217	$1,119	$2,890	$33,071

PROJECT A was an investment in new facilities and equipment to increase **First Defense®** production capacity.
PROJECT B was an investment to build and equip our Drug Substance facility for **Re-Tain™**.
PROJECT C is a $3.5 million investment in new facilities and equipment to increase **First Defense®** production capacity.
PROJECT D is a $4 million investment to bring the formulation and aseptic filling services for **Re-Tain™** in house.
PROJECT E represents other miscellaneous, routine and necessary capital investments during the years.

See additional disclosures in our periodic filings with the SEC for more detail about these investments.

Section #4: Other Information

First Defense® Product Line

- **The First Defense® product line is the only USDA-licensed,** orally delivered scours preventative with claims against *E. coli,* coronavirus and rotavirus.
- **Colostrum (first milk) consumption immediately after birth provides critically important antibodies** before the immune system matures to produce its own antibodies. Our hyperimmunization program and the use of bovine colostrum makes our product unique.
- **Three primary formats:**
  1) The original (approved in 1991) **Dual-Force First Defense®** in a bolus
  2) The new (approved in 2017) **Tri-Shield First Defense®** in a gel tube
  3) The newest (approved in 2018) **Dual-Force First Defense®** in a gel tube
- The **First Defense®** product line **provides Immediate Immunity™** to newborn calves.
- **Verified antibodies** are more progressive and protective than a **variable vaccine response.**

First Defense® Product Line (continued)

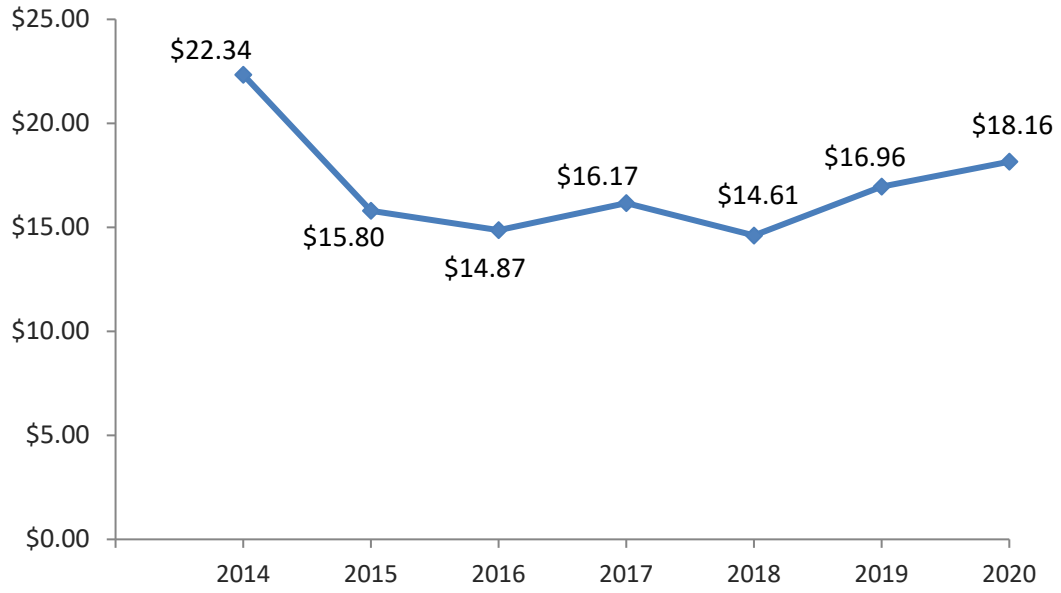
- **More than 26 million doses sold** in aggregate (as of 4Q 2020)
- **Annual gross margin** consistently near 50% since 2007
- **With the addition of rotavirus claim,** we provide a unique breadth of protection against three leading pathogens
- **Improved competitive position** against calf-level products
- **Now able to compete more effectively** against dam-level scours vaccine products
- **Producers can save needles and labor** for vaccines that are more critical to cow health
- **Invest in viable calves** only
- We are completing an investment of about $3.5 million to **increase annual production capacity** from approximately $16.5 million to around $23 million

Economics of Dairy Industry

- Milk price improved during 2014, but it has not returned to that level since. The price for 2019 was 16% higher than the 2018 average. The price for 2020 was 7% higher than the 2019 average.
- The Milk-to-Feed Ratio has not returned to the high level reached in 2014.

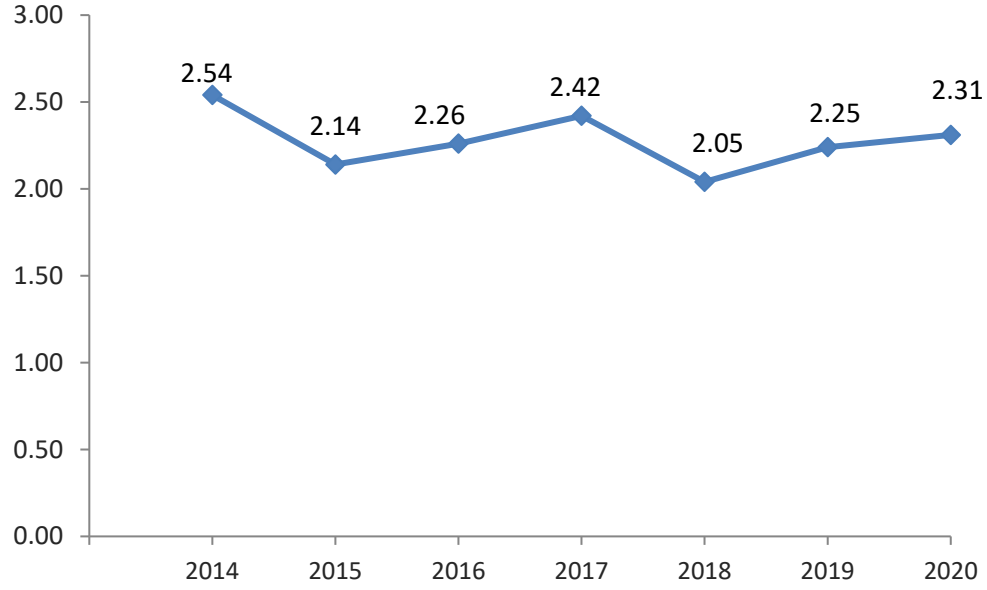
Average Class III Milk Price

(for the years ended December 31st)



Average Milk-to-Feed Price Ratio

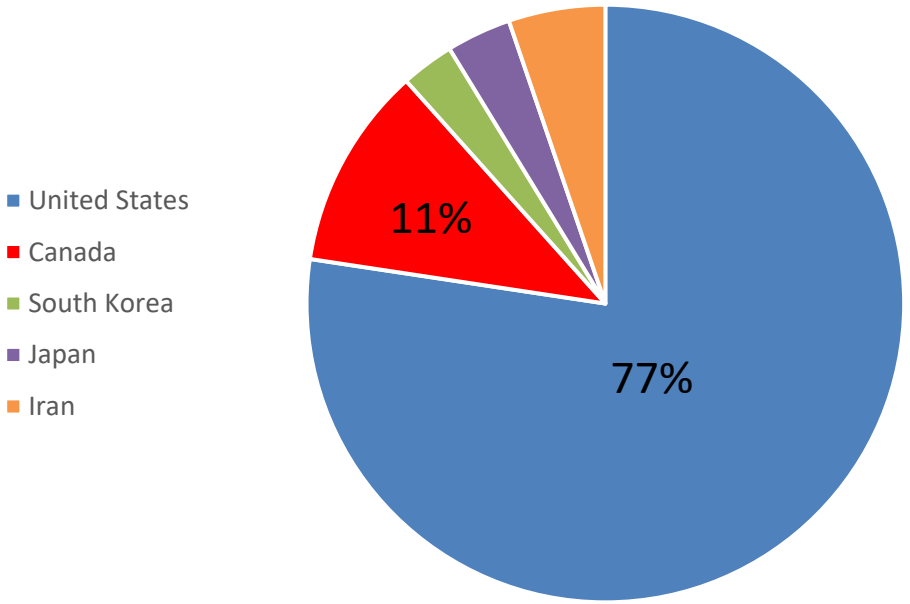
(for the years ended December 31st)



Source: US Department of Agriculture (USDA)

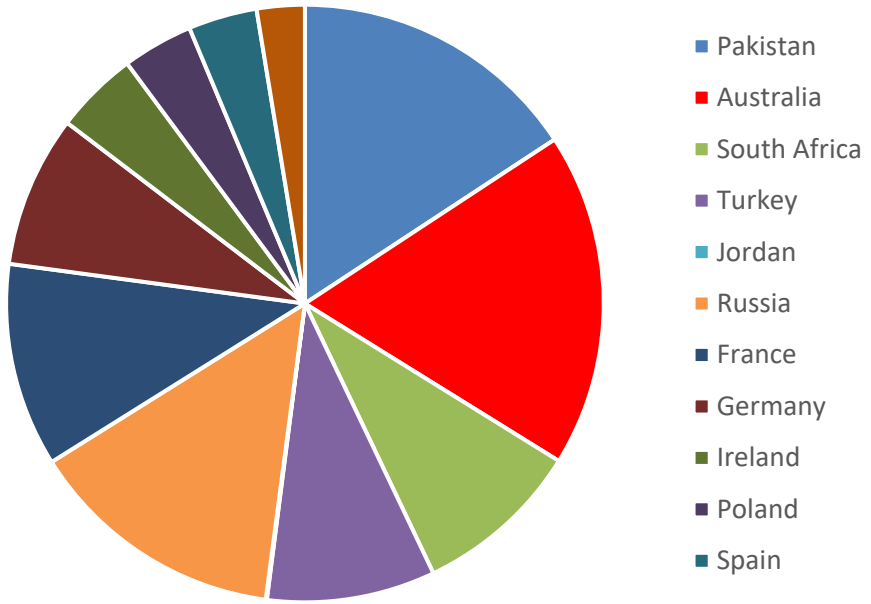
Cattle Market Overview

Cattle inventory in markets currently served



Total number of dairy and beef cattle: 116,080,000

Cattle inventory in new markets being researched



Total number of dairy and beef cattle: 153,118,000

Source: The Food and Agricultural Organization for the United Nations

What is **Scours**?

- The disease manifests as rampant, **uncontrolled diarrhea** in newborn calves.
- **Scours is the leading calf disease risk**. We estimate the cost to the U.S. dairy and beef industries to be approximately $741 million.(1)
- **Percent of pre-weaned heifer deaths** caused by scours or other digestive problems:

  57%(2)

- **Incidence rate** of scours in live births:

  23%(3)

- **Scours is an economic drain in three ways:**
  1. Calf losses (death)
  2. Treatment costs (antibiotics, rehydration fluids, and increased labor/nursing back to health)
  3. Reduced productivity (less growth and milk production)

(1) *See next slide (#46) for detailed, estimated calculations.*
(2) *USDA report, Dairy 2007 Heifer Calf Health and Management Practices on U.S. Dairy Operations, 2007.*
(3) *APHIS/NAHMS 2007 Info Sheet III, Highlights of Dairy 2007 Part III: Reference of Dairy Cattle Health and Management Practices in the United States, 2007.*

Scours: Cost to the U.S. Dairy & Beef Industries

Scours Related Cost to Dairy Industry

$119 million – Calf Deaths
$45 million – Scours Treatments
$90 million – Reduced Weight Gain
$75 million – Reduced Milk Production
$329 million estimated annual cost

Scours Related Cost to Beef Industry

$76 million – Calf Deaths
$112 million – Scours Treatments
$224 million – Reduced Weight Gain
$412 million estimated annual cost

ESTIMATED ANNUAL COST TO DAIRY & BEEF INDUSTRIES
$741 million

Dairy Calf Deaths

Deaths prior to weaning	7.8%
% of above deaths from scours	56.5%
Number of calves	9,000,000
Wet calf value (increases towards $1,000 with age)	$300
Cost to dairy industry due to scours deaths	**$118,989,000**

Scours Treatments

Live calves treated for scours	25.0%
Number of calves	9,000,000
Treatment costs (labor, antibiotics, fluids)	$20
Cost to dairy industry due to scours treatment	**$45,000,000**

Reduced Weight Gain

Pounds lighter at weaning	20
Price per pound	$2.00
Calves treated for scours	2,250,000
Cost to dairy industry in reduced weight gain	**$90,000,000**

Reduced Milk Production

Pounds less milk produced per lactation	187
Cost in cwt (1 cwt = 100lb) (price @ December 2014)	$ 17.82
Calves treated for scours	2,250,000
Cost to dairy industry in reduced milk production	**$74,970,000**

Beef Calf Deaths

Deaths prior to weaning	6.4%
% of above deaths from scours	14.2%
Number of calves	28,000,000
Wet calf value (increases towards $1,000 with age)	$300
Cost to beef industry due to scours deaths	**$76,339,200**

Scours Treatments

Live calves treated for scours	20.0%
Number of calves	28,000,000
Treatment costs (labor, antibiotics, fluids)	$20
Cost to beef industry due to scours treatment	**$112,000,000**

Reduced Weight Gain

Pounds lighter at weaning	20
Price per pound	$2.00
Calves treated for scours	5,600,000
Cost to beef industry in reduced weight gain	**$224,000,000**

The data used to compile the estimated cost of calf scours to the dairy and beef industries was derived from our best interpretation of industry reports and understandings with reference to, but not limited to, the following published sources:

- 2007-2008 USDA National Animal Health Monitoring System (NAHMS) Report on Beef Cow-Calf Health and Management,
- USDA Dairy 2007 NAHMS Report on Heifer Calf Health and Management,
- Progressive Dairyman, May 2014, What is scours costing your operation?
- Drovers CattleNetwork, March 2014, Optimizing Calf Health, and
- Economics of Scours, beef worksheet, Pfizer Animal Health.

While ImmuCell believes the figures presented are reasonable for the purpose of this discussion, the actual cost of scours could vary greatly from the estimated figures presented

Pharmaceutical-grade Nisin **Drug Substance** Facility

- Construction of a commercial-scale Nisin Drug Substance facility (in Portland, ME) was initiated 3Q 2016 and completed 4Q 2017.
- Equipment installation was completed in 3Q 2018.
- Cost for this project was approximately $20.8 million.
- Registration batches completed 4Q 2018.
- First FDA site inspection initiated during 3Q 2019.

Relevant Regulatory Initiatives

-2011: Dutch Veterinary Society restricts the use of beta lactams in cattle

-2012: FDA further restricts the use of cephalosporins in food animals

-2017: Veterinary Feed Directive (VFD) restricts the use of medically important antibiotics

-2018: FDA announced 5-year plan for Antimicrobial Stewardship in Veterinary Settings, eliminating production uses of medically important antimicrobials and bringing all therapeutic uses under the oversight of licensed veterinarians

Key Publications Related to the Subclinical Mastitis Market Opportunity

- New York State Cattle Health Assurance Program, Mastitis Module-Veterinary Resource, "Epidemiology of Mastitis".
- Santman-Berends, IM. (2012, May), Incidence of subclinical mastitis in Dutch dairy heifers in the first 100 days in lactation and associated risk factors, *J Dairy Science, 95(5):* 2476-2484.
- Roesch, M. (2007, February), Subclinical mastitis in dairy cows in Swiss organic and conventional production systems, *J Dairy Research, 74(1)*: 86-92.
- Makovec, JA. (2003, November), Results of milk samples submitted for microbiological examination in Wisconsin from 1994 to 2001, *J Dairy Science, 86(11):* 3466-3472.
- Jayarao, BM, et al, Epidemiology of *Streptococcus uberis* intramammary infections in a dairy herd, Zentralbl Veterinarmed B., September 1999, *46(7):* 433-42.
- Pol, M. and Ruegg, P.L. (2007), Relationship between antimicrobial drug usage and antimicrobial susceptibility of gram-positive mastitis pathogens, *J Dairy Science, 90*, 262-273.

Animal Health Industry

Animal Health Companies	Diagnostics and Services Companies	Distributors
Aratana Therapeutics (PETX)[1]	Abaxis (ABAX)[4]	Animal Health International[6]
Bayer AH (BAYRY) [2]	Advanced Animal Diagnostics (Private)	Covetrus (CVET)[7]
Boehringer Ingelheim AH (Private)	Heska Corp. (HSKA)	MWI Animal Health (MWIV) [8]
Dechra Pharmaceuticals (DPH) [3]	IDEXX Laboratories (IDXX)	Patterson Companies, Inc. (PDCO)
Elanco (ELAN)	Organitech (formerly PetHealth)	
Jaguar AH (JAGX)	PetMed Express (PETS)	
Kindred Biosciences (KIN)	VCA Antech (WOOF)	
Merck AH (MRK)		
Neogen (NEOG)		
Nexvet Biopharma (NVET)[4]		
Parnell Pharmaceuticals (PARNF)		
Phibro AH (PAHC)		
Sanofi (Merial) (SNY)		
Virbac AH (VIRP)		
Zivo Bioscience (ZIVO)[5]		
Zoetis (ZTS)		

[1] Acquired by Elanco (ELAN) in July 2019
[2] Acquired by Elanco (ELAN) in August 2020
[3] Dechra acquired Putney Inc.
[4] Acquired by Zoetis (ZTS)
[5] Formerly Health Enhancement Products
[6] Acquired by Patterson Companies, Inc. (PDCO)
[7] Merged with animal health division of Henry Schein
[8] Acquired by AmerisourceBergen Corporation (ABC)

Executive Management Team

Michael F. Brigham
President and Chief Executive Officer, Director

- *Joined ICCC in September 1989*
- *Appointed as President and Chief Executive Officer in February 2000*
- *Director since 1999*
- *Audit Manager at Ernst & Young prior to joining ICCC*

ImmuCell

EY

Bobbi Jo Brockmann
Vice President of Sales and Marketing, Director

- *Joined ICCC in January 2010*
- *Promoted to VP of Sales and Marketing in February 2015*
- *Director since 2017*
- *Previously with APC Inc., W&G Marketing Company Inc.*

APC An LGI Company

W&G Marketing Co., Inc.

Joseph H. Crabb, Ph.D.
Vice President and Chief Scientific Officer

- *Joined ICCC in November 1988*
- *Appointed as Chief Scientific Officer in September 1998*
- *Doctorate and postdoctoral studies at the medical schools of Dartmouth and Harvard, respectively*

THE HARVARD MEDICAL SCHOOL

Dartmouth GEISEL SCHOOL OF MEDICINE

Elizabeth L. Williams
Vice President of Manufacturing Operations

- *Joined ICCC in April 2016*
- *Previously led U.S. region for Zoetis as VP Global Manufacturing and Supply and held Site Leader positions at Pfizer Animal Health Facilities*

zoetis

Pfizer

Board of Directors (outside directors)

Gloria J. Basse
Director

- *Member of the Compensation and Stock Option Committee*
- *Director since 2020*
- *Zoetis, Context Network, independent consultant, Tonisity International*

David S. Cunningham
Director

- *Member of the Compensation and Stock Option Committee and Nominating Committee*
- *Director since 2011*
- *Bimeda, Axxiom Consulting, Teva Animal Health and Agri Laboratories, Ltd.*

Steven T. Rosgen
Director

- *Member of the Audit Committee*
- *Director since 2018*
- *Strategem Research Inc., Street Smart Strategic Planning*

Board of Directors (outside directors) (continued)

Jonathan E. Rothschild
Director

- *Member of the Audit Committee and the Compensation and Stock Option Committee*
- *Director since 2001*
- *Arterio Inc., CCA Industries, Inc.*

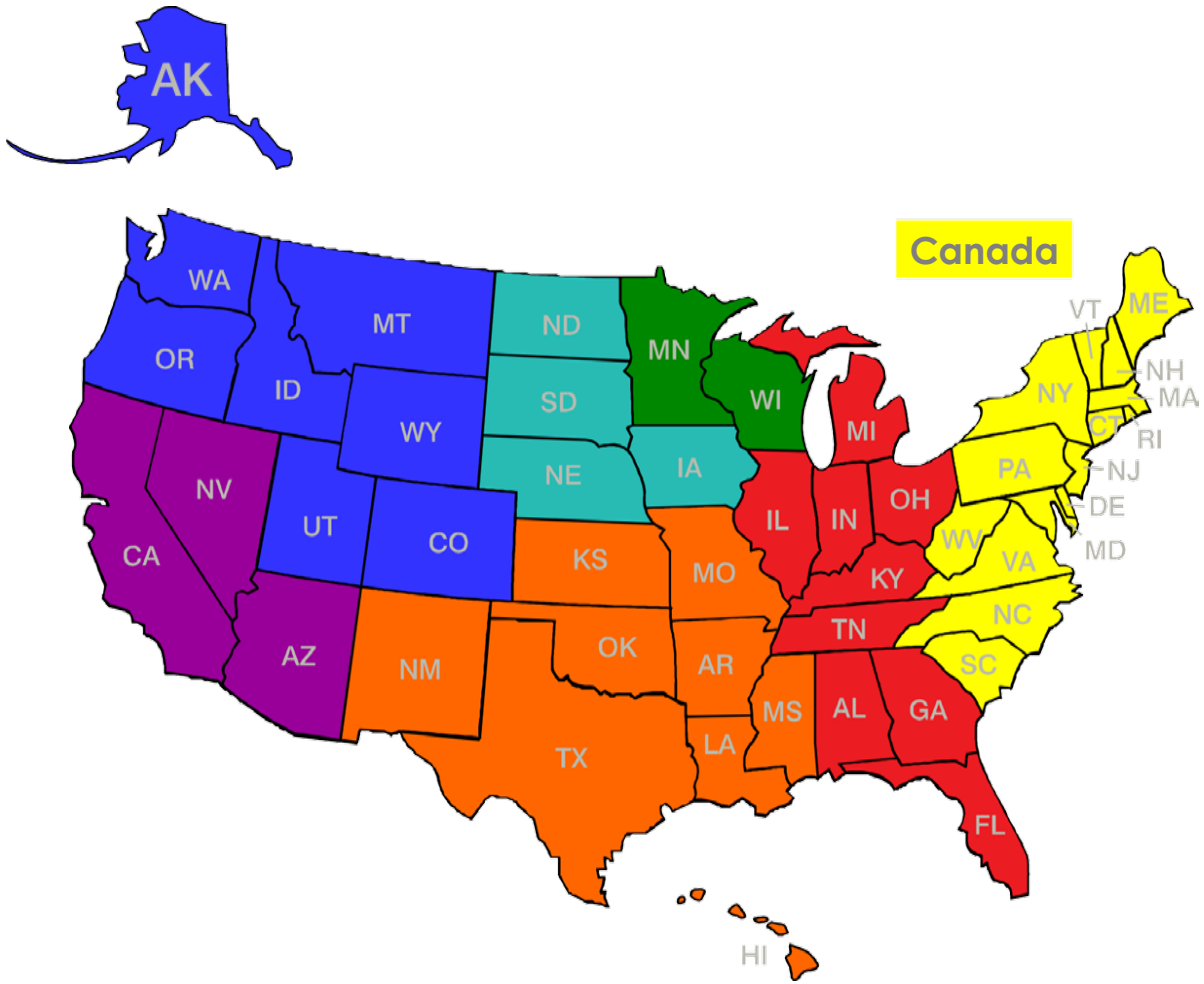
David S. Tomsche, D.V.M.
Chair of the Board

- *Appointed to Chair of the Board in February 2013*
- *Director since 2006*
- *Leedstone Inc., J-t Enterprises of Melrose, VetPharm Inc.*

Paul R. Wainman
Director

- *Member of the Audit Committee and Nominating Committee*
- *Director since 2014*
- *Hancock Lumber, Kleinfeld Paper, William Arthur Inc.*

Sales & Marketing Territories



Your Calf Crew®

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Open Position
Sales and Marketing Manager
Western Region

Dale Miller
Sales & Marketing Manager
Northeast US and Canada Region

Michael Borges
Sales & Marketing Manager
California Plus Region

Becky Vincent
Sales & Marketing Manager
Great Lakes Region

Jill Sprakel
Sales & Marketing Manager
Midwestern Region

Ellen Cushing
Sales & Marketing Manager
Upper Midwestern Region

David "DJ" Dominguez
Sales & Marketing Manager
Southern Region

Visit us on Facebook, Instagram and YouTube at Immediate Immunity™

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